

Reynolds Creek Hydroelectric Project

August 2012 Project Update

Alvin Edenshaw, Chairman of the Board
Haida Energy, Inc.

Corry V. Hildenbrand, Project Manager

Haida Corporation

- Located in Hydaburg on Prince of Wales Island.
- Hydaburg population = 350 people (called Kaigani Haida)
- Hydaburg is largest Haida Village in Alaska
- Subsistence and Commercial Fishing Lifestyle
- Substantial Timber Holdings

Prince of Wales Island

- Third Largest Island in United States
- 135 miles x 45 miles
- Population = 6,000
- Economy Centers on Fishing, Timber, & Tourism
- 2008 Energy Consumption = 26,313 MWh
- Two Existing Hydro Projects: Black Bear Lake (4.5 MW) and South Fork (2.3 MW)
- Remainder of Generation is Diesel-fired

Reynolds Creek Hydroelectric Project

- Haida Corporation has been planning development of the project for more than 20 years.
- Joint Venture
- Incorporated Haida Energy, Inc.
October 15, 2009, in Alaska
- Ownership:
 - 75% Haida Energy Inc.
 - 25% Alaska Power & Telephone Company (local utility)

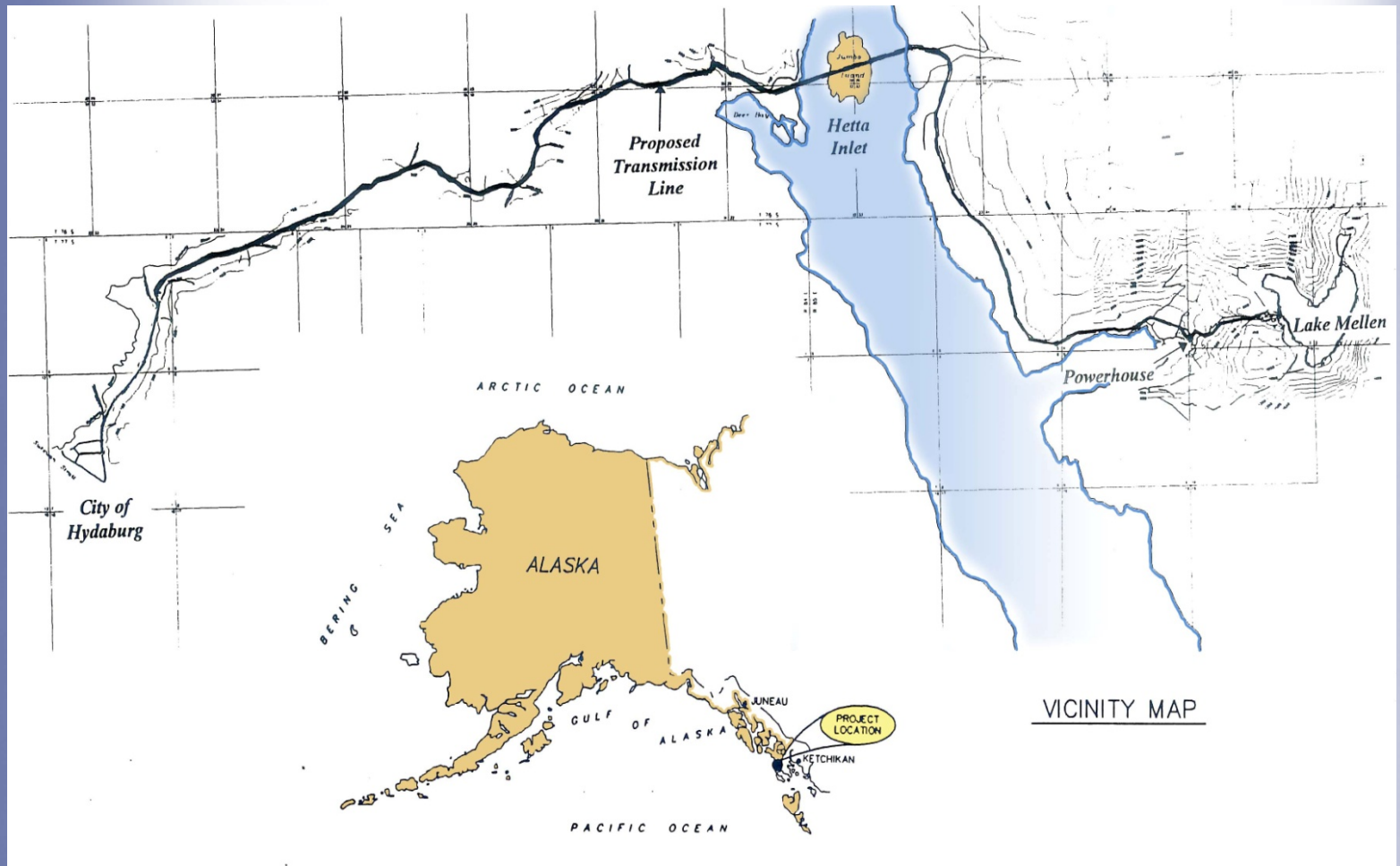
Reynolds Creek Hydroelectric Project

- FERC License received October 2000.
- The Project is vital to promoting future growth and business opportunities within the region.
- The project will financially benefit the ratepayers through near elimination of diesel costs.
- Power users will benefit from increased stability in the cost of power and the increase in reliability of the electrical system.

Project Team

- Lead Consultant – HDR Engineering, Inc.
- Project Management – Hildenbrand Assoc. LLC
- Economic Feasibility/Financing – Financial Engineering Company
- FERC Licensing – GKRSE Law Firm, Washington, D.C.
- Joint Venture Agreements – Kemppel Huffman & Ellis, Anchorage

Project Location

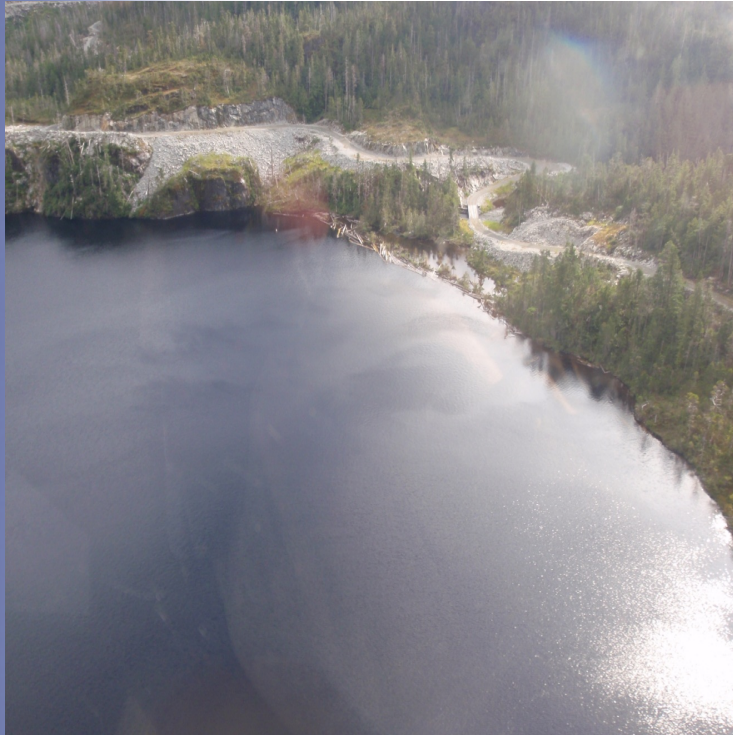


Principal Project Components

- 28-ft-long, 6-ft-high Diversion Structure at Outlet of Rich's Pond
- Lake Mellen/Rich's Pond provide 600 acre-feet of storage
- 42-inch diameter, 3200-ft-long Penstock
- Powerhouse (One 5 Megawatt Unit)
- 34 kV, 12-mile-long Transmission Line

Reynolds Creek Project

Lake Mellen Outlet



Rich's Pond Inlet

Reynolds Creek Project

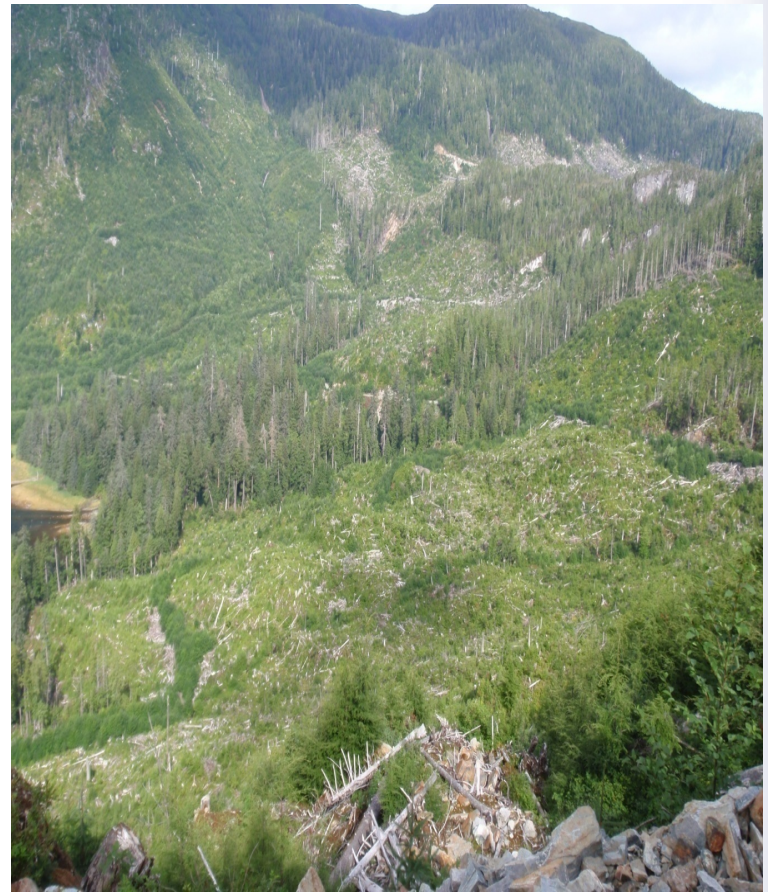
Rich's Pond



Rich's Pond Outlet

Reynolds Creek Project

Upper Reynolds Creek



Lower Reynolds Creek

Project Characteristics

- Approximately 750 feet of Head
- Average Annual Energy Production =
19.3 million kilowatt-hours
- Land Owned by Haida Energy Corporation and Sealaska – both Alaska Native Corporations
- Alaska Power Company will Operate, and Purchase Power From Project
- Will Allow All Interconnected Portions of Prince of Wales Island to be Supplied by Hydropower

Project Characteristics

- Minimal Environmental Impact
- Utilizes Existing Logging Roads for Access
- Fish in Reynolds Creek drainage include grayling, Dolly Varden, cutthroat trout, pink and chum salmon, and steelhead
- Terrestrial Species include Sitka black-tailed deer and black bear

Major Approvals Received

- FERC License (Project No. 11480) received October 2000.
- Corps of Engineers Permit
- Fish Habitat Permit
- Coastal Zone Consistency Determination
- Water Rights Permit

Major Construction Milestones

- Began Construction – October 24, 2010
- Civil Access Work – September 2011 – June 2012 (completed)
- Began Transmission Line Const. – August 2011 (1-mile completed)
- Order Turbine/Generator – November 2012
- Project On-line – Summer 2016

Project Costs

Item of Work	Amount (\$)
Mobilization & Logistics	3,725,000
Access Facilities	929,000
Reservoirs, Dams & Waterways	1,562,000
Penstock	4,186,000
Powerhouse	3,810,000
Transmission Line	3,350,000
Completion	340,000
Other Professional Services/ Administration Costs	4,848,000
TOTAL PROJECT COSTS (Rounded)	22,750,000

RCH Project – 201 Wor

RCH Project – 2011 Work



Pioneering on Powerhouse Road

Area perspective from above Lake Mellen on access road. Excavator is at start of dam access road



RCH Project – 2011 Work

Overburden Removal on Dam Access Road



Overview of Powerhouse Road Construction

RCH Project – 2011 Work

**Contractor salvaging rock from
“1-Mile Pit”**



Overview of 1-mile Pit

RCH Project – 2011 Work

**Hetta Inlet, Copper Harbor and
Boat Ramp and Staging Area**



**Application of Straw Mulch and
Fiber Log for Erosion Control**

RCH Project – 2011 Work



Transmission Line Installation

Blast from upper road
perspective on the Powerhouse
Road



RCH Project – 2012 Work



Repair of a minor slide at 3.6 mile Copper Harbor Road.

Truck and Komatsu 220 loading rock from quarry at 3 mile Copper Harbor Road



RCH Project – 2012 Work



Loader loading culverts in staging area for installation

Komatsu 220 working on culvert excavation sta 4+00 and ditch cleaning Powerhouse Road



RCH Project – 2012 Work

Slope Staking work along Rich's pond near Diversion pipe invert.



Biologists in boats completing the Grayling survey in Lake Mellen

RCH Project – 2012 Work

Dozer working the rock fill on
Dam Access road



Komatsu 220 working on pioneer access route to
highline area, Greg on temporary access route

RCH Project – 2012 Work

Corry and Glenn (FERC) watching the Excavator expose the rock surface on the south abutment of the Dam site



Dam Access Road

RCH Project – 2012 Work

Drilling test hole in Temporary Reynolds Creek Crossing



Loading Rock at beginning of Dam Access Road for culvert backfill

RCH Project – 2012 Work



Completing topographic survey work around the Dam site

Drilling on RC 4



RCH Project – 2012 Work



Drilling on RC2

Core Samples



Project Schedule

	TASK	START	FINISH
•	REYNOLDS CREEK CONSTRUCTION SCHEDULE (FERC PROJECT P-11480-AK)	10/25/2010	8/19/2016
–	CONSTRUCTION START	10/25/2010	10/25/2010
–	PROJECT MANAGEMENT & ADMINISTRATION	1/3/2011	8/19/2016
–	DAM SITE EVALUATION & PERMITTING	5/26/2012	11/22/2013
–	ROAD ACCESS IMPROVEMENTS	5/20/2013	10/9/2013
–	CAMP	11/3/2014	7/13/2015
–	MARINE ACCESS	4/3/2013	11/21/2013
–	TURBINE/GENERATOR: ORDER, FABRICATE, DELIVER INSTALL	9/1/2012	5/5/2016
–	POWERHOUSE SITE: DESIGN, ORDER MATERIAL, BUILD INSTALL	4/1/2013	8/24/2015
–	SUBSTATION: DESIGN, ORDER, BUILD	4/1/2013	9/18/2015
–	TRANSMISSION LINE	4/6/2013	11/12/2014
–	DAM: DESIGN, ORDER MATERIAL, CONSTRUCT	11/22/2013	7/14/2015
–	VALVE VAULT/INTAKE SYSTEM	4/17/2015	9/22/2015
–	CLEAR/GRUB/SURVEY ALIGNMENT ACTIVITIES (PENSTOCK ALIGNMENT)	4/4/2013	10/15/2013
–	PENSTOCK: DESIGN, ORDER, INSTALL, TEST	10/15/2013	4/14/2016
–	STARTUP/TEST	5/5/2016	6/28/2016
•	COMMERCIAL OPERATION	6/28/2016	6/18/2016